DOCUMENT RESUME

ED 214 706 RC 013 241

AUTHOR Cotton, Kathleen; Savard, W. G.

TITLE Time Factors in Learning. Research on School Effectiveness Project: Topic Summary Report.

INSTITUTION Northwest Regional Educational Lab., Portland, Oreg.

SPONS AGENCY Alaska State Dept. of Education, Juneau. Office of Planning and Research.
PUB DATE 20 Feb 81
NOTE 113p.; For related documents, see RC 013 234-242.

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Academic Achievement; Educational Planning; *Educational Research; Elementary Secondary Education; *Literature Reviews; *Outcomes of Education; Policy Formation; State of the Art Reviews; *Time on Task
IDENTIFIERS *Alaska Research on School Effectiveness Project; School Effectiveness

ABSTRACT

The Alaska School Effectiveness Project produced several reports in a series of reviews of research literature on such topics as time factors in learning. Using an ERIC search and conventional library methods, the question raised was "Is there a positive relationship between the amount of allocated time for studying a subject and achievement in that subject?" Thirty-five valid studies were reviewed. Based on various findings, it was concluded that the greater the amount of engaged time, the higher the levels of student achievement. Of all measures of student learning time, the rate of academic learning time (ALT) constitutes the best predictor of achievement. It is therefore recommended that: (1) time allocations for different subjects should reflect the relative priorities given to the various subject areas; (2) efforts should be made to keep the amount of classroom "dead time" at a minimum; (3) additional instructional time allotments, preferably in an interactive mode, should be provided for low-ability, low-achieving students; (4) techniques should be applied which can increase the amount of time students spend on task; and (5) activities and methods which result in greater amounts of ALT should be utilized. The document includes item decision displays, a 48 item bibliography, and individual item reports on the citations. (BRR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED214706

Topic Summary Report

TIME FACTORS IN LEARNING

Research on School Effectiveness Project

Prepared for:

Alaska Department of Education
Office of Planning and Research

February 20, 1981

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M. Margaret Rogers

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Audit and Evaluation Program
Northwest Regional Educational Laboratory
710 S.W. Second Avenue
Portland, Oregon 97204

RC 013241

PREFACE

This report is one of several in a series of reviews of research literature conducted for the Alaska School Effectiveness Project. Each of the reports addresses a topic which is deemed to have an impact, actual or potential, on school effectiveness. All of the reports have been generated using the same general approach and a common reporting format.

The review process begins with a topical literature search using both computer based ERIC and conventional library methods. Articles and other documents found are analyzed and abstracted into a brief form called an Item Report. Each of the items is then judged against a set of pre-established criteria and ranked on a five-point scale. The collection of Item Reports are then examined for purposes of identifying issues. These issues are stated in the form of hypotheses. Each hypothesis thus generated becomes the subject of a Decision Display. A Decision Display is created by sorting the Item Reports into those which support or negate the hypothesis, are inconclusive, are badly flawed, or are irrelevant. One or more Decision Displays are generated for each topic addressed. A Summary Report is then generated from the consideration of the Decision Displays and the file of Item Reports. Thus, each complete report in the series consists of a Summary Report which is backed up by one or more Decision Displays which in turn are supported by a file of Item Reports. This format was designed to accommodate those readers who might wish to delve into various depths of detail.

This report is not intended to represent the "final word" on the topic considered. Rather, it represents the analysis of a particular collection of research documents at this time. There may be other documents that were not found because of time or other limitations. There may be new research published tomorrow. This present report represents our best judgment of available information at this time. This format allows for modification and re-analysis as new information becomes available or old information is re-interpreted.

For a more complete description of the analysis process see William G. Savard, Procedures for Research on School Effectiveness Project, Northwest Regional Educational Laboratory, December 10, 1980.

Topic: Time Factors in Learning
Authors: Kathleen Cotton/W. G. Savard
Date: February 20, 1981

Research on instructional time has sought answers to a number of questions: What is the relationship between the time allocated for the study of a given subject and achievement in that subject? Does increased time-on-task actually produce achievement gains? Is there is a more meaningful measure of productive instructional time than the time-on-task concept?

The questions are important ones. As more knowledge is gained about the effects of time factors on educational outcomes, implications emerge for curriculum development, for teacher training, for school staffing and scheduling and for other aspects of the educational process, such as classroom planning.

The sizeable body of research on the relationship between instructional time and student achievement is focused on three major instructional time measures:

1. Allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

2. Engaged time or time-on-task: the amount of time spent paying attention to a learning activity and attempting to learn.

3. Academic learning time (ALT): the amount of time spent by a student in an academic task that he or she can perform with high success.

Forty-eight documents on instructional time were examined. Eleven of these were deemed irrelevant, either because they were not research studies or because certain relationships between time and learning were assumed rather than investigated. Two of the studies were reported in more than one source and under different titles; in both cases, the

BLANK PAGE
DO NOT FILM

second report retrieved was eliminated from the analysis. Thirty-five valid studies, which were relevant to one or more of the time measures defined above, were reviewed in preparation for this report. Twenty-eight were primary sources, six were secondary sources and one reported both a literature review and a research study conducted by its author.

The age/grade levels of the student subjects in these studies were: preschool/kindergarten-3, elementary-20, secondary-5, both elementary and secondary-5, junior high-1, not specified-1.

Three of the studies reviewed were concerned with both achievement and affective outcomes such as attitudes, self-esteem and coping skills. The achievement areas with which the studies were concerned included: reading-9, mathematics-4, both reading and mathematics-6, general achievement-10, science-2, social studies-1, language arts-2 and communication skills-1.

Finally, the kinds of time measures examined were: allocated time-13, engaged time-12, both allocated and engaged time-4, and these two measures plus academic learning time (a relatively new concept)-6. The findings emerging from these studies are organized according to these different kinds of time measures.

Findings

Allocated time. A review of the research studies which focused on allocated time suggested the following hypothesis: "There is a positive relationship between the amount of allocated time for studying a subject and achievement in that subject." Although the studies suggested this hypothesis, the picture which emerges from analysis of the studies is by no means perfectly clear (see Decision Display #1). Considerable numbers

of high quality studies support this notion, and nearly as many equally well-done studies deny it. Most of the supportive studies revealed a "modest, but persistent" relationship between allocated time and achievement, especially for low-ability students and especially if greater time allotments are spent in interactive activities with the teacher rather than on homework or seatwork. Several of the studies state in their conclusions that, while time allocations are obviously necessary for learning to take place, increasing allocated time without a comparable increase in activities which facilitate learning is not likely to promote significant achievement gains. Increases in allocated time were even found to have a negative relationship to achievement beyond a certain point and particularly for high-ability students.

Engaged time or time-on-task is much closer to the heart of the matter as a predictor of achievement. The studies suggested and overwhelmingly supported the hypothesis that "there is a positive relationship between the amount of engaged time given to a subject and achievement in that subject." Those students who appeared to spend the greatest amounts of time-on-task were higher achievers than those who were off-task by overt or covert measures. Some differences in achievement outcomes were noted, however, for different kinds of on-task behavior. Students who had high engagement rates in listening, discussing, question answering and other kinds of interactive classroom activities achieved more than those who had high engagement rates in only non-interactive activities such as seatwork. As one researcher expressed it, when the students are on-task, but the teacher is not teaching, achievement benefits are modest at best.

Academic Learning Time (ALT). The few studies reviewed which were organized around the ALT concept were all well-designed investigations

DO NOT FILM

and gave rise to the hypothesis that "there is a positive relationship between the amount of academic learning time given to a subject and achievement in that subject." These studies stress the inadequacy of allocated and engaged time amounts (and especially the former) as producers of achievement gains in and of themselves. Instead, these studies focus on the necessity for allocated time, plus task engagement, plus teaching methods and task content which result in the student working at an "appropriate level of difficulty and experiencing success." While these studies do not recommend eliminating seatwork, homework or individual student projects, they do emphasize that interactive approaches such as direct instruction are most effective in increasing the amount of ALT expended by students.

Conclusions

Learning, like all things, takes place in time, and time allocations are therefore necessary for learning to take place. If high- and low-ability students alike are unable to master a given lesson or unit in a certain period of time, benefits can be expected from increasing the time allocation. Low-ability students can benefit from various kinds of additional instructional time and practice, though some of these (such as parent tutoring, resource room participation) are much more effective than others (such as extra seatwork or homework). Increasing time allocations will not automatically produce achievement gains; benefits begin to accrue when additional time allocations are accompanied by effective instruction and appropriate task content.

The greater the amount of engaged time, the higher the levels of student achievement. While this point is rather obvious, establishing the importance of engagement rate serves to disuade those who would

BLANK PAGE
DO NOT FILM

increase allocated time alone in hopes of promoting achievement gains. High engagement rates in interactive classroom activities have a more positive effect on achievement than high engagement rates in non-interactive activities alone. While too few of the studies discussed affective outcomes for these to be a major subject of this report, there is evidence that engagement in interactive activities also enhances such attributes as self-confidence and attitude.

Of all measures of student learning time, the rate of academic learning time (ALT) constitutes the best predictor of achievement. Students working on material that is appropriately challenging and which is presented in such a way that interaction occurs between student and teacher and among students, can be expected to make significant achievement gains.

Recommendations

1. Time allocations for the different subjects which comprise the curriculum should reflect the relative priorities given to the various subject areas. Since a "modest, but persistent" relationship exists between time allocations and achievement, schools and districts are encouraged to allocate relatively large amounts of time to those subject areas in which student success has been determined to matter the most.
2. Efforts should be made to keep the amount of classroom "dead time" at a minimum. Dead time rate, defined as the amount of allocated learning time during which the opportunity to learn is not present for one reason or another, was quite high in the classrooms studied and described. Business matters (taking roll, collecting lunch money), interruptions, discipline problems and

CLEAN PAGE
DO NOT FILM

situations in which there is nothing the students are expected to be doing, are pernicious dead time producers. Teachers and others are encouraged to deal with these matters efficiently so that reasonable amounts of allocated time are present.

3. Additional instructional time allotments should be provided for low-ability, low-achieving students, preferably in an interactive mode. Resource teachers and aides can provide extra time and help and, as demonstrated in a previous report in this series, parent-student instruction can be a powerful means of enhancing achievement.

4. Techniques which can increase the amount of time students spend on-task should be applied. Positive teacher feedback, interactive instructional methods, minimum amounts of dead time and the opportunity for students to select some of their learning activities have been shown to increase engagement rates, and teachers are encouraged to utilize these approaches.

5. Activities and methods which result in greater amounts of ALT should be utilized. Teacher familiarity with student academic history and ability level is essential in order that material at an appropriately challenging and rewarding level of task difficulty can be found and presented. Opportunities for teachers to become familiar with and to access a wide range of proven instructional materials should be provided in order that material which can facilitate ALT increases is available.

BLANK PAGE
DO NOT FILM

TIME FACTORS IN LEARNING
Decision Display
#1

Restatement of issue as a hypothesis:

There is a positive relationship between the amount of allocated time for studying a subject and achievement in that subject.

Item Number	Short Title	Quality Rating of Study [ ]	
Items which tend to support hypothesis:			
36	Fredrick & Walberg, 1980, Time Research Review	[4]	(Most of 51 studies support)
125	Borg, 1980, BTES & Other Time Studies	[4]	(Most studies support)
126	Fisher, et al., 1980, BTES Final Field Study	[4]	
135	Stallings, 1980, Allocated Time Revisited	[4]	(Nearly all studies reviewed support)
142	O'Donnell, 1976, ERIC/RCS Time Review	[4]	(Nearly all of 15 studies support)
144	Kidder, et al., 1975, Quantity and Quality of Instruction	[4]	
158	Hanson & Ross, 1975, Instructional Time Adequacy	[4]	
167	Wiley & Harnischfeger, 1974, Quantity of Schooling	[4]	
129	Bloom, 1974, Time and Learning	[3]	
131	Fisher, et al., 1976, BTES Grade 2 Math	[3]	
149	Fredrick, 1977, Time Use and Reading	[3]	
127	Anderson, 1980, Learning Time Research Synthesis	[2]	(Most studies reviewed support)
143	Jarvis, 1962, Texas Gulf Coast Study	[2]	
163	Husen, 1967, International Math Study	[2]	
164	Nieman & Gastright, 1975, Preschool Programs	[2]	
171	Isaacs & Stennett, Increasing Time on Task	[2]	
Items which tend to deny hypothesis:			
36	Fredrick & Walberg, 1980, Time Research Review	[4]	(Some of 51 studies deny
125	Borg, 1980, BTES & Other Time Studies	[4]	(Some studies reviewed deny)
135	Stallings, 1980, Allocated Time Revisited	[4]	(A few studies reviewed deny)

BLANK PAGE
DO NOT FILM

Items which tend to deny hypothesis: (Continued)

142	O'Donnell, 1976, ERIC/RCS Time Review	[4]	(A few studies reviewed deny)
153	Rosenshine, n.d., Academic Engaged Time	[4]	(Virtually all studies reviewed deny)
134	Lomax & Cooley, 1979, Achievement/ Instructional Time	[3]	(All 10 studies deny)
162	Karweit, 1976, Quantity a Major Factor	[3]	
165	Welch & Bridgham, 1968, Student Ability	[3]	
127	Anderson, 1980, Learning Time Research Synthesis	[2]	(Some studies reviewed deny)
146	Deady, 1969, Science Achievement & Attitudes	[2]	
161	Smith, 1979, Allocated Time/Social Studies	[2]	

Items which are inconclusive regarding the hypothesis:

139	Kiesling, 1975, Reading Time Study	[2]

Items which were excluded because they were weak:

None

Items which were excluded because they were judged to be irrelevant to this hypothesis:

128 Bloom, 1974, Time and Learning
130 Weber, 1977, Environment and Learner Involvement
132 Rusnock & Brandler, 1979, Time-Off-Task/Learning
133 Anderson, n.d., Task Behavior and Achievement
136 Arlin, 1979, Teacher Transitions
137 Myrow, 1979, Learner Choice
138 Schultz, 1973, Attention and Achievement
140 Calfee & Calfee, 1976, RAMOS
141 Jones, 1976, Mastery and Aptitude
145 Good & Beckerman, 1978, Naturalistic Time Study
147 Carnahan, 1980, Teacher Planning
148 Attwell, et al., 1967, Kindergarten Behavior and Fifth Grade Achievement
150 Arehart, 1979, Opportunity to Learn
151 Slavin, 1978, Teams & Equals
152 Sjogren, 1967, Achievement and Study Time
154 McKinney, et al., 1975, Behavior & Achievement
155 Anderson & Scott, 1978, Method and Student Involvement
156 O'Connor, et al., 1979, Resource Room Effects
157 Wyne & Stuck, 1979, Time-on-Task/Reading
159 Barley, 1975, Time Dissertation
160 Fredrick, et al., 1979, High School Time Use
166 Lorentz & Coker, 1980, Classroom Behavior & Achievement
168 Fox, 1978, Tracing Teacher Effects
169 Easton, et al., 1979, Time and Elementary Reading
170 Stallings, 1979, Secondary Remedial Reading

BLANK PAGE
DO NOT FILM

TIME FACTORS IN LEARNING
Decision Display
#2

Restatement of issue as a hypothesis:

There is a positive relationship between the amount of engaged time (or time-on-task) given to a subject and achievement in that subject.

Item Number	Short Title	Quality Rating of Study [ ]	
Items which tend to support hypothesis:			
125	Borg, 1980, BTES & Other Time Studies	[4]	(Virtually all studies) support)
126	Fisher, et al., 1980, BTES Final Field Study	[4]	
135	Stallings, 1980, Allocated Time Revisited	[4]	(Virtually all studies reviewed support)
142	O'Donnell, 1976, ERIC/RCS Time Review	[4]	(All 15 studies support)
153	Rosenshine, n.d., Academic Engaged Time	[4]	(Virtually all studies reviewed support)
156	O'Connor, et al., 1979, Resource Room Effects	[4]	
160	Fredrick, et al., 1979, High School Time Use	[4]	
169	Easton, et al., 1979, Time and Elementary Reading	[4]	
131	Fisher, et al., 1976, BTES Grade 2 Math	[3]	
133	Anderson, n.d., Task Behavior and Achievement	[3]	
134	Lomax & Cooley, 1979, Achievement/ Instructional Time	[3]	(All 10 studies support)
138	Schultz, 1973, Attention and Achievement	[3]	
145	Good & Beckerman, 1978, Naturalistic Time Study	[3]	
149	Fredrick, 1977, Time Use and Reading	[3]	
154	McKinney, et al., 1975, Behavior & Achievement	[3]	
168	Fox, 1978, Tracing Teacher Effects	[3]	
127	Anderson, 1980, Learning Time Research Synthesis	[2]	(Most studies reviewed support)
147	Carnahan, 1980, Teacher Planning	[2]	
148	Attwell, et al., 1967, Kindergarten Behavior and Fifth Grade Achievement	[2]	
171	Isaacs & Stennett, Increasing Time on Task	[2]	

BLANK PAGE
DO NOT FILM

Items which tend to deny hypothesis:

132	Rusnock & Brandler, 1979, Time-Off-Task/ Learning	[2]
151	Slavin, 1978, Teams & Equals	[2]

Items which are inconclusive regarding the hypothesis:

None

Items which were excluded because they were weak:

None

Items which were excluded because they were judged to be irrelevant to this hypothesis:

36	Fredrick & Walberg, 1980, Time Research Review
128	Bloom, 1974, Time and Learning
129	Gettinger & White, 1979, Learning Time vs. Intelligence
130	Weber, 1977, Environment and Learner Involvement
136	Arlin, 1979, Teacher Transitions
137	Myrow, 1979, Learner Choice
139	Kiesling, 1975, Reading Time Study
140	Calfee & Calfee, 1976, RAMOS
141	Jones, 1976, Mastery and Aptitude
143	Jarvis, 1962, Texas Gulf Coast Study
144	Kidder, et al., 1975, Quantity and Quality of Instruction
146	Deady, 1969, Science Achievement & Attitudes
150	Arehart, 1979, Opportunity to Learn
152	Sjogren, 1967, Achievement and Study Time
155	Anderson & Scott, 1978, Method and Student Involvement
157	Wyne & Stuck, 1979, Time-on-Task/Reading
158	Hanson & Ross, 1975, Instructional Time Adequacy
159	Barley, 1975, Time Dissertation
161	Smith, 1979, Allocated Time/Social Studies
162	Karweit, 1976, Quantity a Major Factor
163	Husen, 1967, International Math Study
164	Nieman & Gastright, 1975, Preschool Programs
165	Welch & Bridgham, 1968, Physics Achievement
166	Lorentz & Coker, 1980, Classroom Behavior & Achievement
167	Wiley & Harnischfeger, 1974, Quantity of Schooling
170	Stallings, 1979, Secondary Remedial Reading

BLANK PAGE
DO NOT FILM

TIME FACTORS IN LEARNING
Decision Display
#3

Restatement of issue as a hypothesis:

There is a positive relationship between the amount of academic learning time given to a subject and achievement in that subject.

Item Number	Short Title	Quality Rating of Study [ ]	
Items which tend to support hypothesis:			
125	Borg, 1980, BTES & Other Time Studies	[4]	(All studies support)
126	Fisher, et al., 1980, BTES Final Field Study	[4]	
135	Stallings, 1980, Allocated Time Revisited	[4]	(All studies support)
142	O'Donnell, 1976, ERIC/RCS Time Review	[4]	
131	Fisher, et al., 1976, BTES Grade 2 Math	[3]	
127	Anderson, 1980, Learning Time Research	[2]	

Items which tend to deny hypothesis:

None

Items which are inconclusive regarding the hypothesis:

None

Items which were excluded because they were weak:

None

BLANK PAGE
DO NOT FILM

Items which were excluded because they were judged to be irrelevant to this hypothesis:

36 Fredrick & Walberg, 1980, Time Research Review
128 Bloom, 1974, Time and Learning
129 Gettinger & White, 1979, Learning Time vs. Intelligence
130 Weber, 1977, Environment and Learner Involvement
132 Rusnock & Brandler, 1979, Time-Off-Task/Learning
133 Anderson, n.d., Task Behavior and Achievement
134 Lomax & Cooley, 1979, Achievement/Instructional Time
136 Arlin, 1979, Teacher Transitions
137 Myrow, 1979, Learner Choice
138 Schultz, 1973, Attention and Achievement
139 Kiesling, 1975, Reading Time Study
140 Calfee & Calfee, 1976, RAMOS
141 Jones, 1976, Mastery and Aptitude
143 Jarvis, 1962, Texas Gulf Coast Study
144 Kidder, et al., 1975, Quantity and Quality of Instruction
145 Good & Beckerman, 1978, Naturalistic Time Study
146 Deady, 1969, Science Achievement & Attitudes
147 Carnahan, 1980, Teacher Planning
148 Attwell, et al., 1967, Kindergarten Behavior & Fifth Grade Achievement
149 Fredrick, 1977, Time Use and Reading
150 Arehart, 1979, Opportunity to Learn
151 Slavin, 1978, Teams & Equals
152 Sjogren, 1967, Achievement and Study Time
153 Rosenshine, n.d., Academic Engaged Time
154 McKinney, et al., 1975, Behavior & Achievement
155 Anderson & Scott, 1978, Method and Student Involvement
156 O'Connor, et al., 1979, Resource Room Effects
157 Wyne & Stuck, 1979, Time-on-Task/Reading
158 Hanson & Ross, 1975, Instructional Time Adequacy
159 Barley, 1975, Time Dissertation
160 Fredrick, et al., 1975, High School Time Use
161 Smith, 1979, Allocated Time/Social Studies
162 Karweit, 1976, Quantity a Major Factor
163 Husen, 1967, International Math Study
164 Nieman & Gastright, 1975, Preschool Programs
165 Welch & Bridgham, 1968, Physics Achievement
166 Lorentz & Coker, 1980, Classroom Behavior & Achievement
167 Wiley & Harnischfeger, 1974, Quantity of Schooling
168 Fox, 1978, Tracing Teacher Effects
169 Easton, et al., 1979, Time and Elementary Reading
170 Stallings, 1979, Secondary Remedial Reading
171 Isaacs & Stennett, 1979, Increasing Time on Task

BLANK PAGE
DO NOT FILM

BIBLIOGRAPHY

Item No.	Citation
133	Anderson, L. W. A measure of student involvement in learning: Time on-task. Columbia: University of South Carolina (no date). (ERIC/EDRS No. ED 110 504)
127	Anderson, L. W. Learning time and educational effectiveness. NASSP Curriculum Report, 1980, 10, 2.
155	Anderson, L. W. & Scott, C. C. The relationship among teaching method, student characteristics, and student involvement in learning. Journal of Teacher Education, 1978, 29(3), 52-57.
150	Arehart, J. E. Student opportunity to learn related to student achievement of objectives in a probability unit. Journal of Educational Research, 1979, 72, 253-258.
136	Arlin, M. Teacher transitions can disrupt time flow in classrooms. American Educational Research Journal, 1979, 16, 42-56.
148	Attwell, A. A., Orpet, R. E. & Myers, C. E. Kindergarten behavior ratings as a predictor of academic achievement. Journal of School Psychology, 1967, 6, 43-46.
159	Barley, S. D. Time: In school, and learning. Ed.D. Dissertation, University of Rochester, 1975. (DA 2583-A)
128	Bloom, B. S. Time and learning. American Psychologist, 1974, 29, 682-688.
125	Borg, W. R. Time and school learning. In C. Denham and A. Lieberman (Eds.), Time to Learn. Washington, DC: National Institute of Education, 1980.
140	Calfee, R. C. & Calfee, K. H. Reading and mathematics observation system: Description and measurement of time usage in the classroom. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1976. (ERIC/EDRS No. ED 131 115)
147	Carnahan, R. S. The effects of teacher planning on classroom processes. Technical Report No. 541, Madison: Wisconsin R & D Center for Individualized Schooling, May 1980.
146	Deady, G. M. The effects of an increased time allotment on student attitudes and achievement in science. Doctoral dissertation, University of California-Berkley, 1969.

BLANK PAGE
DO NOT FILM

169 Easton, J. Q., Muirhead, R. S., Fredrick, W. C. & Vanderwicken, S. Relationship among student time on task, orientation of teachers, and instructional grouping in elementary reading classes. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 1979. (ERIC/EDRS No. ED 169 503)

131 Fisher, C. W., et al. A study of instructional time in grade 2 mathematics. (BTES-Beginning Teacher Evaluation Study Technical Report II-3). San Francisco: Far West Laboratory for Educational Research and Development, June 1976. (ERIC/EDRS No. ED 147 186)

126 Fisher, C. W., et al. Teaching behaviors, academic learning time, and student achievement: An overview. In C. Denham and A. Lieberman (Eds.), Time to Learn. Washington, DC: National Institute of Education, 1980.

168 Fox, R., et al. Tracing teacher effects through student behavior to learning outcomes. Washington, D.C.: NIE, August 1978. (ERIC/EDRS No. ED 169 039)

149 Fredrick, W. C. The use of classroom time in high schools above or below the median reading score. Urban Education, 1977, 11, 459-464.

36 Fredrick, W. C. & Walberg, H. J. Learning as a function of time. The Journal of Educational Research, 1980, 73, 185-194.

160 Fredrick, W. C., Walberg, H. J. & Rasher, S. P. Time, teacher comments, and achievement in urban high schools. Journal of Educational Research, 179, 73, 63-65.

129 Gettinger, M., & White, M. A. Which is the stronger correlate of school learning? Time to learn or measured intelligence? Journal of Educational Psychology, 1979, 71, 405-412.

145 Good, T. L. & Beckerman, T. M. Time on task: A naturalistic study in sixth grade classrooms. The Elementary School Journal, 1978, 78, 193-201.

158 Hanson, R. A. & Ross, S. M. The adequacy of instructional time allocation. Studies in Educational Evaluation, 1975, 1, 23-29.

163 Husen, T. (Ed.) School decisions relative to curriculum--Problems related to the curriculum and instructional methods. Chapter 4 of International study of achievement in mathematics. (Vol. 2), New York: John Wiley & Sons, 1967, 143-198.

171 Isaacs, L. M. & Stennett, R. G. Increasing "time on task" through a multi-method approach to reading instruction. Research Report, London Board of Education (Ontario), 1979. (ERIC/EDRS No. ED 181 404)

BLANK PAGE
DO NOT FILM

143 Jarvis, O. T. Time allotments and pupil achievement in the intermediate elementary grades: A Texas Gulf Coast study, 1962. (ERIC/EDRS No. ED 035 063)

141 Jones, G. F. The effects of mastery and aptitude on learning, retention and time. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1976. (ERIC/EDRS No. ED 126 381)

162 Karweit, N. Quantity of schooling: A major educational factor? Educational Researcher, 1976, 5(2), 15-17.

144 Kidder, S. J., et al., Quantity and quality of instruction: empirical investigations. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC, March 31-April 3, 1975. (ERIC/EDRS No. ED 110 417)

139 Kiesling, H. The relationship of time spent on reading instruction to reading gains as measured by norm-referenced and criterion-referenced tests. Bloomington, IN: Indiana University, 1975. (ERIC/EDRS No. ED 116 135)

134 Lomax, R. G., & Cooley, W. W. The student achievement-instructional time relationship. Paper presented at the Annual Meeting of the American Educational Research Association, April 1979. (ERIC/EDRS No. ED 179 598)

166 Lorentz, J. L. & Coker, H. Empirically derived dimensions of classroom behavior as predictors of student achievement. Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, April 1980.

154 McKinney, J. D., Mason, J., Perkerson, K., and Clifford, M. Relationship between classroom behavior and academic achievement. Journal of Educational Psychology, 1975, 67, 1980-203.

137 Myrow, D, L. Learner choice and task engagement. Journal of Experimental Education, 1979, 47, 200-207.

164 Nieman, R. H. & Gastright, J. F. Preschool plus all-day kindergarten: The cummulative effects of early child programs on the cognitive growth of four and five year old children. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., March-April 1975. (ERIC/EDRS No. ED 105 998)

156 O'Connor, P. D., Stuck, G. B. & Wyne, M. D. Effects of a short-term intervention resource-room prpgram on task orientation and achievement. The Jounal of Special Education, 979, 13, 375-385.

142 O'Donnell, H. Instructional time as related to reading achievement. The Reading Teacher, 1978, 32, 246-251.

BLANK PAGE
DO NOT FILM

153 Rosenshine, B. V. Academic engaged time, content covered, and direct instruction. University of Illinois, n.d.

132 Rusnock, M., & Brandler, N. Time-off-task: Implications for learning. Paper presented at the Annual meeting of the American Educational Research Association, San Francisco, April, 1979. (ERIC/EDRS No. ED 171 407)

138 Schultz, E. A. An investigation of the relationship between individual differences in attention and reading achievement in first grade. Masters Thesis, Rutgers University, 1973. (ERIC/EDRS No. ED 108 117)

152 Sjogren, D. D. Achievement as a function of study time. American Educational Research Journal, 1967, 4, 337-343.

151 Slavin, R. E. Student teams and comparison among equals: Effects on academic performance and student attitudes. Journal of Educational Psychology, 1978, 70, 532-538.

161 Smith, N. M. Allocation of time and achievement in elementary social studies. Journal of Educational Research, 1979, 72, 231-236.

135 Stallings, J. Allocated academic learning time revisited, or beyond time on task. Educational Researcher, 1980, 9(11), 11-16.

170 Stallings, J. A. Instructional processes that work in remedial reading classes. Paper presented at "R & D Speaks: Classroom Management" Conference, Dallas, Texas, May 1979.

130 Weber, M. B. The effect of learning environment on overt learner involvement and relevant achievement. Paper presented at the Annual Meeting of the American Educational Research Association, New York, April 1977. (ERIC/EDRS No. ED 152 791)

165 Welch, W. W. & Bridgham, R. G. Physics achievement gains as a function of teaching duration, School Science and Mathematics, 1968, 68, 449-455.

167 Wiley, D. & Harnischfeger, A. Explosion of a myth: Quantity of schooling and exposure to instruction, major educational vehicles. Educational Researcher, 1974, 3(4), 7-12.

157 Wyne, M. D. & Stuck, G. B. Time-on-task and reading performance in underachieving children. Journal of Reading Behavior, 1979, 11, 119-128.

BLANK PAGE
DO NOT FILM

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 125 LOCATION: NWREL/NIE Publications

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Borg, W. R. Time and school learning. In C. Denham and A. Lieberman (Eds.), Time to Learn. Washington, DC: National Institute of Education, 1980.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Borg, 1980, BTES & Other Time Studies

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good review of an important set of studies.

SYNOPSIS:

This report discusses several theoretical models on time and learning and presents findings from the Beginning Teacher Evaluation Study (BTES) on academic learning time. This abstract focuses on the review of learning time research included in the report.

Three kinds of studies are reviewed--those dealing with allocated time, those concerned with engaged time and those focusing on academic learning time (ALT). See Item Report No. 126 for the BTES findings. The definitions of allocated time, engaged time and academic learning time are as follows:

allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

engaged time (or time-on-task): the amount of time spent paying attention to the learning activity and attempting to learn.

academic learning time (ALT): the amount of time spent by a student engaged in an academic task that he or she can perform with high success.

ITEM NUMBER: 125 SHORT TITLE: Borg, 1980
BTES & Other Time Studies

RESEARCHER'S FINDINGS:

Allocated Time: All studies found that allocated learning time varies enormously from subject to subject and school to school (or district to district). Examples: one study found that second grade math instruction in one district was allocated 4 1/2 times the amount of time allocated to any other subject; the district which emphasized literature the most allocated 109 times as much time to it as the district which emphasized it the least. Most studies have found positive relationships between allocated time and student achievement, but some have not. The BTES study found a positive relationship between allocated time for a content area and achievement in that area.

Engaged Time: Though studies on engaged time have been structured in different ways, all found a positive relationship between engaged time and achievement. These studies reveal great differences from classroom to classroom, subject to subject and student to student in the amount of on-task behavior observed. BTES found a positive relationship between engaged time in math and reading on the one hand, and achievement on the other.

Academic Learning Time (allocated time + engagement rate + high success rate): The BTES study, in which the ALT concept was formulated, found that ALT is positively related to student achievement.

RESEARCHER'S CONCLUSIONS:

"In tracing the previous research on allocated time and engaged time, we find consistent relationships with pupil achievement that increase as research focuses more sharply on the actual time the individual pupil devotes to relevant academic work."

"This [ALT] model...appears to be a clear advance over other formulations, and appears to form a useful basis for making future decisions regarding time allocations and for shaping future policies in areas such as teacher education and certification.

REVIEWER'S NOTES AND COMMENTS:

The full technical reports on the BTES study may be obtained from: BTES, Commission for Teacher Preparation and Licensing, 1020 "O" Street, Sacramento, CA 95814. Several of these are also in ERIC.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 126 LOCATION: NWREL/NIE Publications

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Fisher, C. W., et al. Teaching behaviors, academic learning time, and student achievement: An overview. In C. Denham and A. Lieberman (Eds.), Time to Learn. Washington, DC: National Institute of Education, 1980.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Fisher, et al., 1980, BTES Final Field Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good, well-designed and conducted study. It should be replicated at other grade levels.

SYNOPSIS:

This article presents and discusses some of the findings from the Beginning Teacher Evaluation Study (BTES), a complex, six-year research project funded by the National Institute of Education. The portion of the BTES research described here was the last of four field studies, which was conducted in 1977-78. Subjects included 25 second grade and 21 fifth grade teachers and their students. Within the student group, 139 second graders and 122 fifth graders were selected for intensive data collection throughout the year.

Students were pre- and post-tested with various math and reading subtests. Attitudes toward reading, math and school were also tested. Records were kept by observers on allocated learning time, engaged time and success rates.* Teaching behavior were observed and recorded, and teacher planning functions were profiled during interviews with teachers. General characteristics of the classroom and the instructional program were noted and given ratings.

Continued

ITEM NUMBER: 126 SHORT TITLE: Fisher, et al., 1980
BTES Final Field Study

*allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

engaged time (or time-on-task): the amount of time spent paying attention to the learning activity and attempting to learn.

academic learning time (ALT): the amount of time spent by a student engaged in an academic task that he or she can perform with high success.

RESEARCHER'S FINDINGS:

The amount of time teachers allocate to instruction in a particular content area is positively associated with student learning in that content area. Other factors which are positively associated with learning are the proportion of allocated time students are engaged (on-task) and the proportion of time that reading or math tasks are performed with high success. Low success in performing math or reading tasks is associated with lower achievement. Increases in ALT do not produce more negative attitudes toward reading, math or school.

Other findings, which are concerned with classroom environment and processes include: 1) teacher accuracy in diagnosing student skill levels is related to student achievement and ALT; 2) teacher prescription of appropriate tasks is related to student achievement and success rate; 3) more substantive interaction between teacher and student is associated with higher student engagement; 4) academic feedback is positively associated with student learning; 5) structured teaching is positively related with student success; 6) responding to student's needs for explanation is negatively associated with high scores; 7) reprimanding inappropriate behavior is negatively asociated with student learning; 8) the teacher's value system is related to ALT and to student achievement, with teacher emphasis on academic goals being positively assoicated with student learning; 9) student responsibility and cooperation on tasks is associated with achievement.

RESEARCHER'S CONCLUSIONS:

Those things that promote ALT and which are under the control of the teacher should be noted and used to advantage.

Students learn more when teachers know more about what their individual students can and cannot do--diagnosis is an important part of effective teaching. Appropriate prescription is equally important. Structured teaching methods and sufficient feedback enhance learning.

"The teacher must try to balance conflicting goals, taking into account the needs of the class as a whole, as well as the needs of individual students. There is not one 'right' way to organize the instructional program."

REVIEWER'S NOTES AND COMMENTS:

The full technical reports on the BTES study may be obtained from: BTES, Commission for Teacher Preparation and Licensing, 1020 "O" Street, Sacramento, CA 95814. Several of these are also in ERIC.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 127 LOCATION: NWREL Info. Cntr./Project Files

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Anderson, L. W. Learning time and educational effectiveness. NASSP Curriculum Report, 1980, 10, 2.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Anderson, 1980, Learning Time Research Synthesis

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Findings from several studies are presented, but information about methods, number and kinds of students studied, etc. are not referenced.

SYNOPSIS:

This edition of the NASSP Curriculum Report is devoted to a review/synthesis of research and other literature on the relationship between learning time and educational outcomes, particularly achievement.

ITEM NUMBER: 127 SHORT TITLE: Anderson, 1980
Learning Time Research Synthesis

RESEARCHER'S FINDINGS:

Researchers have identified three distinct types of learning time: 1) allocated time--the amount of time scheduled for a learning activity and during which they presumably have the opportunity to learn; 2) engaged time or time-on-task--the amount of time students spend actually attempting to learn; and 3) academic learning time--the amount of time students are engaged in learning and succeeding at learning.

There is a positive relationship between the amount of learning time (by any of these measures) and achievement. However, within this general finding, other important findings are noted: 1) when tasks are at a level of difficulty that promotes success, students spend more time engaged in learning; 2) high-ability students spend more of their time on-task and are more consistent in their use of time than low-ability students; 3) instructional approaches--mastery learning and direct instruction--are associated with high levels of time-on-task.

RESEARCHER'S CONCLUSIONS:

Allocated time amounts for learning should be based on clear curriculum priorities.

"Learning time is seen as a key to improving student achievement, but the possibilities for implementation are many" [as demonstrated by the variety of exemplary programs developed out of research on learning time and instruction. Several of these are described in the article.]

"The concept of learning time...has implications for the assessment of instructional and teaching effectiveness.... Time-on-task...can provide teachers with information about their strengths and weaknesses."

REVIEWER'S NOTES AND COMMENTS:

A copy of the review/synthesis may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 128 LOCATION: NWREL Info. Cntr/Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Bloom, B. S. Time and learning. American Psychologist, 1974, 29, 682-688.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Bloom, 1974, Time and Learning

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This is not a true literature review. Rather, findings from several studies are cited and discussed in relation to the principles of mastery learning. It is, however, a thoughtful and provocative article.

ITEM NUMBER: 128 SHORT TITLE: Bloom, 1974
Time and Learning

RESEARCHER'S FINDINGS:

None found.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

A copy of the article and references can be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 129 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Gettinger, M., & White, M. A. Which is the stronger correlate of school learning? Time to learn or measured intelligence? Journal of Educational Psychology, 1979, 71, 405-412.

DESCRIPTORS: Time Factors (Learning), Academic Ability

SHORT TITLE: Gettinger & White, 1979, Learning Time vs. Intelligence

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good study but it does not focus directly on the concerns of this project.

SYNOPSIS:

This study sought to determine whether student IQ or learning time was the more important factor in student achievement. The study was first conducted with 71 students in grades 4, 5 and 6 (Sample 1); and a replication study (Sample 2) involved 82 students from these same grade levels. After being given IQ tests, the students were presented with six learning tasks--in vocabulary, spelling, math concepts, math computation, reading comprehension and reading for facts. For each task, students followed a process--directions from the instructor, reading and listening to taped lesson content, and taking a short criterion test--up to eight times until the mastery level was achieved.

ITEM NUMBER: 129 SHORT TITLE: Gettinger & White, 1979
Learning Time vs. Intelligence

RESEARCHER'S FINDINGS:

The time required to learn the tasks (an average of 3-4 trials in Sample 1 and 4-5 trials in Sample 2) was more closely related to achievement than was student IQ. This was true in all task areas, for all grades and for students of both sexes.

The study data supported the findings of other studies to the effect that pupils vary widely in their learning rates. "...the fastest pupils learned the same amount of material to the same level of achievement from 6 to 9 times as fast as the slowest pupils, depending on the particular task."

RESEARCHER'S CONCLUSIONS:

"Time to learn has been shown to be related to intelligence and achievement and can best be measured by the number of trials to criterion on academic tasks.... For any type of educational setting, the value of a measure of time to learn is that early in an academic year pupils can be identified who might be expected to need more time and more repetitive drill to learn, and extra time and help provided accordingly, so that mastery can be reached on early units within a curriculum or within an academic program."

REVIEWER'S NOTES AND COMMENTS:

The data also demonstrates that the more time the children spent learning each task, the better they achieved on the criterion tests. The researchers do not discuss this, however, as it is treated as an assumption rather than something to be proved.

A copy of the study article may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 130 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Weber, M. B. The effect of learning environment on overt learner involvement and relevant achievement. Paper presented at the Annual Meeting of the American Educational Research Association, New York, April 1977. (ERIC/EDRS No. ED 152 791)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Weber, 1977, Environment and Learner Involvement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study concludes that certain learning environments, including highly structured materials and highly directive teaching, produce greater amounts of on-task behavior and assumes that greater amounts of on-task behavior produce higher achievement.

ITEM NUMBER: 130 SHORT TITLE: Weber, 1977
Environment and Learner Involvement

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 131 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Fisher, C. W., et al. A study of instructional time in grade 2 mathematics. (BTES-Beginning Teacher Evaluation Study Technical Report II-3). San Francisco: Far West Laboratory for Educational Research and Development, June 1976. (ERIC/EDRS No. ED 147 186)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Fisher, et al., 1976, BTES Grade 2 Math

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The study was carefully designed and carried out. The small size of the sample and the relatively small amount of time devoted to the study limit its conclusiveness.

SYNOPSIS:

This is one of several "sub-studies" of the ambitious Beginning Teacher Evaluation Study (see Item No. 126), which produced important learnings about the relationship between time factors and both achievement and affective outcomes.

In this study, researchers investigated the relationship between amounts of instructional time devoted to second grade mathematics and math achievement. Achievement tests were administered to nine classrooms of second graders, after which teachers logged allocated time for math instruction for a period of eight weeks. In six classes, observers recorded actual time-on-task.

ITEM NUMBER: 131 SHORT TITLE: Fisher, et al., 1976
BTES Grade 2 Math

RESEARCHER'S FINDINGS:

A positive relationship was found between allocated time and achievement and an even more positive relationship was noted between engaged time and achievement. These findings were consistent with those emerging from the BTES studies generally.

Researchers also noted that subjects observed spent, on the average, approximately one-half of the time allocated for mathematics instruction actually engaged in learning activities.

Large differences were noted within and between classes in student engagement rates.

RESEARCHER'S CONCLUSIONS:

Researchers caution that the sample used for the study was small and that the period over which time and achievement were examined was short. They conclude, nevertheless, that the methods used warrant further application in future studies.

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 132 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Rusnock, M., & Brandler, N. Time-off-task: Implications for learning. Paper presented at the Annual meeting of the American Educational Research Association, San Francisco, April, 1979. (ERIC/EDRS No. ED 171 407)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Rusnock & Brandler, 1979, Time-Off-Task/Learning

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This study has is a reasonable design but involves a very small sample.

SYNOPSIS:

This study investigated the relationship between off-task student behavior and achievement growth. Fourth graders with a two-year history of high achievement growth and those demonstrating low achievement growth were selected as subjects. Four target students were observed during different instruction in different subjects and in different kinds of activities (e.g., individual, group). Each target student was observed 30 times for 30 minutes.

ITEM NUMBER: 132 SHORT TITLE: Rusnock & Brandler, 1979
Time-Off-Task/Learning

RESEARCHER'S FINDINGS:

The high achievement growth (AG) children tended to be off-task during creative activities, while low AG children were more likely to be off-task during structured activities, e.g., recitation.

The subject area (science, reading) was a more important determinant of off-task behavior than format (listening, writing, discussion) for both groups.

High and low AG students spent nearly equal amounts of time off-task.

RESEARCHER'S CONCLUSIONS:

"Monitoring and providing successful experiences for low AG students may encourage on-task behavior.... Since high AG students appear to go off-task upon completion of their work, provision of more on different activities may maintain their on-task behavior."

REVIEWER'S NOTES AND COMMENTS:

The design for this study may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 133 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Anderson, L. W. A measure of student involvement in learning: Time on-task. Columbia: University of South Carolina (no date). (ERIC/EDRS No. ED 110 504)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Anderson, n.d., Task Behavior and Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Although the main purpose of this study was to develop an instrument, the findings are relevant to purposes of the present review.

SYNOPSIS:

This study was designed to: 1) test the validity of techniques and instruments for measuring student task behavior, and 2) to examine the relationship between both overt and covert student task behavior and achievement.

Observers recorded the task behaviors of 177 junior high mathematics students in three classes--arithmetic, algebra and matrix arithmetic. The classes required different kinds of task behaviors (e.g., performing seatwork or attending a lecture), and observers utilized techniques for measuring both overt and covert student behavior. (Overt behavior was measured by means of an observer recording whether the student appeared to be on task; covert behavior was measured by querying the student about his or her thoughts at particular moments during the class period.

ITEM NUMBER: 133 SHORT TITLE: Anderson, n. d.
Task Behavior and Achievement

RESEARCHER'S FINDINGS:

A positive relationship between time-on-task and achievement was noted for all three classes and for both seatwork and lecture activities.

An overall time-on-task rating was arrived at by combining a students' overt and covert task behaviors. There was a positive relationship between covert behavior and achievement; the relationship between overt task behavior and achievement ranged from unclear to very high, depending on the kind of task; the composite time-on-task measure was a far better predictor of achievement than either the overt or the covert measure by itself.

RESEARCHER'S CONCLUSIONS:

A multiple measure of student task behaviors, i.e., one which measures both overt and covert behaviors, is superior to techniques which measure only overt or covert behavior.

The lack of a valid multiple measure may be the reason that little research has been conducted on the student behavior-student learning relationship.

REVIEWER'S NOTES AND COMMENTS:

A description of the instruments, the method and the major findings may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 134 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Lomax, R. G., & Cooley, W. W. The student achievement-instructional time relationship. Paper presented at the Annual Meeting of the American Educational Research Association, April 1979. (ERIC/EDRS No. ED 179 598)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Lomax & Cooley, 1979, Achievement/Instructional Time

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

A good review which presents the major problems associated with instructional time research as well as the findings of such research.

SYNOPSIS:

Ten studies investigating the relationship between instructional time and achievement in elementary school reading and mathematics were reviewed. These studies were concerned with general classroom research (3), instructional time research (3), and attention research (4).

allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

engaged time (or time-on-task): the amount of time spent paying attention to the learning activity and attempting to learn.

academic learning time (ALT): the amount of time spent by a student engaged in an academic task that he or she can perform with high success.

ITEM NUMBER: 134 SHORT TITLE: Lomax & Cooley, 1979
Achievement/Instructional Time

RESEARCHER'S FINDINGS:

The review indicated that the relationship between instructional time and academic achievement was not as strong as generally believed. Allocated time was found to be unrelated to achievement, while engaged time (or attention) was only moderately related to achievement.

A lengthy "methodological discussion" indicated that the relationship would have been stronger if certain methodological problems were not present.

RESEARCHER'S CONCLUSIONS:

Researchers concluded that instructional time is highly related to achievement and that this is easily demonstrated when engaged time, rather than allocated time, is used as the instructional time measure, and when modern, more sophisticated methods of data analysis are used.

REVIEWER'S NOTES AND COMMENTS:

The references, which display the studies reviewed, may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 135 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Stallings, J. Allocated academic learning time revisited, or beyond time on task. Educational Researcher, 1980, 9(11), 11-16.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Stallings, 1980, Allocated Time Revisited

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This study is well-designed and conducted in both of its phases. The review is brief, but presents the major findings from several important time studies from the recent past.

SYNOPSIS:

This paper presents both the salient points of instructional time research conducted during the 1970s and the findings from a particular study conducted by the author and her colleagues.

The review traced research from studies on allocated time, through studies of engaged time, to studies concerning academic learning time (ALT).

The study, called the teaching of Basic Reading Skills in Secondary Schools, had two phases. Phase I, a correlational study, involved 43 teachers and their classes. Observers logged the use of time as to whether it was on-or-off-task and, if on-task, what kind of on-task behavior it was, interactive or noninteractive. The range of behaviors was then examined against achievement growth scores. In Phase II, a "quasi-experiment," 44 teachers from the same district as those in Phase I were observed, provided inservice experiences based on Phase I findings, observed again, and their students' achievement gains were noted.

Continued

ITEM NUMBER: 135 SHORT TITLE: Stallings, 1980
Allocated Time Revisited

allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

engaged time (or time-on-task): the amount of time spent paying attention to the learning activity and attempting to learn.

academic learning time (ALT): the amount of time spent by a student engaged in an academic task that he or she can perform with high success.

RESEARCHER'S FINDINGS:

From the review: The review cited essentially the same findings as are presented by most researchers and reviewers of research, namely that allocated time, engaged time and academic learning time (ALT) are all positively related to achievement. ALT is the most closely related to achievement, then engaged time (time-on-task) and, finally, allocated time.

From the study: In Phase I, it was found that 1) off-task behaviors were negatively associated with reading achievement gains, 2) non-interactive on-task instruction (silent reading, written assignments) produced some gains, and 3) interactive on-task instruction (discussion, review, reading aloud, drill and practice) produced the greatest gains. The more academically needy the student, the more important interactive activities became. In Phase II, the students of those teachers who received inservice training based on the Phase I findings showed greater gains than those of control teachers. (six months more reading gain, on the average, was noted.) An observation later in the school year also showed that the treatment group maintained most of their behavior changes.

RESEARCHER'S CONCLUSIONS:

"Given the findings from research on teaching in the '70s, educational models would not be complete without considering allocated learning time, student engaged time, distribution of time across activities, interactive instruction and student achievement level."

Interactive on-task instruction is effective in promoting reading gains, most especially for the lowest-achieving students.

Teachers can be trained to use the findings from research on the effective use of time.

REVIEWER'S NOTES AND COMMENTS:

A copy of the review/study cay be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 136 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Arlin, M. Teacher transitions can disrupt time flow in classrooms. American Educational Research Journal, 1979, 16, 42-56.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Arlin, 1979, Teacher Transitions

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study established that time flow is disrupted, and time is therefore wasted, when certain methods of bringing about transitions between activities are used by teachers. Other methods, conversely, conserve time. The relationship between instructional time and student outcomes is not addressed directly.

ITEM NUMBER: 136 SHORT TITLE: Arlin, 1979
Teacher Transitions

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 137 LOCATION: PSU Library/Project Files

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Myrow, D, L. Learner choice and task engagement. Journal of Experimental Education, 1979, 47, 200-207.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Myrow, 1979, Learner Choice

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study looks at the differences between outcomes when teachers determine the task and when learners choose their own tasks. It hypothesizes that greater learner engagement will result when learners make the task choices and that this will lead to greater achievement and retention. It does not, however, examine the relationship between engaged time and student outcomes.

ITEM NUMBER: 137 SHORT TITLE: Myrow, 1979
Learner Choice

RESEARCHER'S FINDINGS:

None found.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

A copy of the entire article can be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 138 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Schultz, E. A. An investigation of the relationship between individual differences in attention and reading achievement in first grade. Masters Thesis, Rutgers University, 1973. (ERIC/EDRS No. ED 108 117)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Schultz, 1973, Attention and Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT X (Masters Thesis)

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a well-done study which convincely demonstrates a relationship between attention level and learning.

SYNOPSIS:

Eighty-one New Jersey first graders (48 boys, 33 girls) comprised the sample for this study, which examined the relationship between attention and reading achievement, reading achievement and IQ, and attention and IQ. Data were gathered separately for boys and girls. Observations were made daily during an eight-week period to assess student attention levels.

While the report provides an in-depth discussion of attention as a psychological phenomenon, the way attention is measured in the study makes it roughly equivalent to engaged time or time-on-task.

ITEM NUMBER: 138 SHORT TITLE: Schultz, 1973
Attention and Achievement

RESEARCHER'S FINDINGS:

A significant positive relationship was found between attention and reading achievement for both girls and boys. The role of IQ in attention and achievement was less clearly defined. IQ was positively related to achievement for girls, but no significant relationship was found for boys. There was a positive relationship bsetween IQ and attention for boys, but no significant relationship was found for girls. Boys and girls in the sample were similar in their percentage of attention and their reading achievment.

RESEARCHER'S CONCLUSIONS:

"...students who are having difficulty with beginning reading skills might benefit from techniques to overcome difficulties with attention."

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 139 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Kiesling, H. The relationship of time spent on reading instruction to reading gains as measured by norm-referenced and criterion-referenced tests. Bloomington, IN: Indiana University, 1975. (ERIC/EDRS No. ED 116 135)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Kiesling, 1975, Reading Time Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

As the researcher himself comments, intervening variables and the short time period limit the validity of this study. Many cells were very small as well, since so many combinations of factors were examined.

SYNOPSIS:

This study investigated the "productivity" of different kinds of reading instruction in a sample of New York elementary classrooms. Data were gathered from approximately 5,800 students in grades 4, 5 and 6. Teachers, aides and specialists kept records of minutes of instruction per week for 9-10 weeks in each of four instructional modes: whole group, small group, individualized instruction and individual help. Criterion-referenced and norm-referenced tests were administered.

ITEM NUMBER: 139 SHORT TITLE: Kiesling, 1975
Reading Time Study

RESEARCHER'S FINDINGS:

A positive relationship was found between amount of instructional time and achievement on criterion-referenced tests, especially when the classroom teacher had provided the instruction. Most of the "instructional inputs" (type of instructor + characteristics of students + mode of instruction + amount of instructional time) were negatively related to achievement on norm-referenced tests. This was especially true of instruction provided by aides and specialists.

Various other findings were reported and explained, e.g., the negative relationship between the amount of materials and equipment used and achievement was probably due to low SES schools having more such equipment purchased with Title I funds.

RESEARCHER'S CONCLUSIONS:

Instruction by the regular classroom teacher appears more effective than instruction by paraprofessionals, specialists, etc. School inputs were more closely related to criterion-referenced than to norm-referenced tests. Low SES students were more strongly affected by school inputs than were higher SES students.

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 140 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Calfee, R. C. & Calfee, K. H. Reading and mathematics observation system: Description and measurement of time usage in the classroom. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1976. (ERIC/EDRS No. ED 131 115)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Calfee & Calfee, 1976, RAMOS

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This paper describes an observation system which facilitates measurement of classroom behavior and time dispensation. Through developed and utilized for several studies, it is not itself a research study.

ITEM NUMBER: 140 SHORT TITLE: Calfee & Calfee, 1976
RAMOS

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

51

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 141 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Jones, G. F. The effects of mastery and aptitude on learning, retention and time. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, April 1976. (ERIC/EDRS No. ED 126 381)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Jones, 1976, Mastery and Aptitude

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study used a self-instructional geography unit in 20 seventh grade classes to assess the effects of a mastery learning procedure and aptitude on learning, retention and time spent studying the unit. It examines the effect upon time expenditure, rather than the effect of time usage.

ITEM NUMBER: 141 SHORT TITLE: Jones, 1976
Mastery and Aptitude

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 142 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: O'Donnell, H. Instructional time as related to reading achievement. The Reading Teacher, 1978, 32, 246-251.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: O'Donnell, 1976, ERIC/RCS Time Review

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good review of major instructional time studies.

SYNOPSIS:

This review was developed by staff of the ERIC Clearinghouse on Reading and Communication Skills and examines major studies and research summaries on the instructional time/achievement relationship. Though the primary interest of the reviewer was reading achievement, many of the studies reviewed looked at achievement in reading and in other subjects. Its title notwithstanding, the review is therefore broader in scope than it might initially seem.

Thirteen studies and reviews were examined. Several of these are individually abstracted on other item reports.

ITEM NUMBER: 142 SHORT TITLE: O'Donnell, 1978
ERIC/RCS Time Review

RESEARCHER'S FINDINGS:

The studies reviewed revealed findings which were consistent with those of instructional time studies generally. Allocated time, however, measured (length of class periods, days in the school year, years of instruction), was positively related to achievement in reading, mathematics, language arts and other subjects. Engaged time, or time-on-task, was even more positively related to achievement in those areas. Academic Learning Time (ALT) was the most reliable predictor of achievement.

These findings were cited in studies of both elementary and secondary students and held true regardless of teaching methods employed. While students in general were found to benefit from greater amounts of time, however measured, low-ability students experienced the greatest benefits.

allocated time: the amount of time scheduled for a learning activity and in which the opportunity to learn is present.

engaged time (or time-on-task): the amount of time spent paying attention to the learning activity and attempting to learn.

academic learning time (ALT): the amount of time spent by a student engaged in an academic task that he or she can perform with high success.

RESEARCHER'S CONCLUSIONS:

The reviewer did not offer general conclusions. Some of the studies concluded/recommended that extra allocated time be provided for lower-ability students and that methods be developed/utilized for increasing engaged time and ALT for students generally. Some studies also cautioned that past a certain point, additional increases in allocated time, without any change in instructional method and engaged time, do not produce additional achievement increases.

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 143 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Jarvis, O. T. Time allotments and pupil achievement in the intermediate elementary grades: A Texas Gulf Coast study, 1962. (ERIC/EDRS No. ED 035 063)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Jarvis, 1962, Texas Gulf Coast Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The conclusions do not seem to be justified by the findings. The findings appear to be reasonable.

SYNOPSIS:

This study was designed to determine the relationship between allocated time (defined as length of class periods) and student achievement in reading, arithmetic and language arts. Mental maturity and achievement tests were administered to 713 students in grade six. Scores were examined in relation to the class period durations in the schools attended by the students.

A review of past and current time allocation practices in the Gulf Coast area accompanies the report of the study.

ITEM NUMBER: 143 SHORT TITLE: Jarvis, 1962
Texas Gulf Coast Study

RESEARCHER'S FINDINGS:

Maximum class period lengths were positively related to achievement in each of the areas tested for students whose IQ scores were 115 or more. For average students, longer class periods resulted in significantly higher achievement in arithmetic and language arts.

RESEARCHER'S CONCLUSIONS:

The conclusions are in the form of recommendations which include: 1) that maximum class period lengths for formalized reading not be in excess of 50 minutes daily; 2) that minimum daily arithmetic periods be set at 55 minutes; 3) that minimum daily class periods for language arts be 40 minutes; and 4) that more research is needed to establish the relationship between time allotments and achievement in the intermediate grades.

The author also concludes, on the basis of the literature review which accompanies the report of the study, that elementary school time allocations are based on "societal pressure, administrative expendiency and opinions of leading educators" rather than learnings from research.

REVIEWER'S NOTES AND COMMENTS:

A copy of the procedures and limitations of the study can be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 144 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Kidder, S. J., et al., Quantity and quality of instruction: empirical investigations. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, DC, March 31-April 3, 1975. (ERIC/EDRS No. ED 110 417)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Kidder, et al., 1975, Quantity and Quality of Instruction

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

Based on the findings, the conclusions regarding the allocated time factor could probably be stronger.

SYNOPSIS:

This study investigated the effects of allocated time on reading achievement. The allocated time/achievement relationship was examined with regard to other variables: student ability, student background, teacher characteristics and instructional mode. The sample consisted of 2,516 students in grades 4, 5 and 6. Data on the quantity and quality* of instruction were gathered via interviews with principals, teachers, specialists and selected teacher aides. Norm-referenced reading tests were administered to students.

---

*"Quality" in this study refers to the characteristics of the instructional situation, not to its worth.

ITEM NUMBER: 144 SHORT TITLE: Kidder, et al., 1975
Quantity and Quality of Instruction

RESEARCHER'S FINDINGS:

Generally, allocated instructional time was positively related to reading achievement, regardless of other variables.

Additional time and help beyond allotted class periods appears helpful for low- and middle-ability students; these are not productive for high-ability students.

RESEARCHER'S CONCLUSIONS:

"Further studies should be designed to determine optimum student ability-instructional time-performance combinations in the school setting."

REVIEWER'S NOTES AND COMMENTS:

A copy of the methods used in the study can be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 145 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Good, T. L. & Beckerman, T. M. Time on task: A naturalistic study in sixth grade classrooms. The Elementary School Journal, 1978, 78, 193-201.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Good & Beckerman, 1978, Naturalistic Time Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Time factors is really not the major focus of study.

SYNOPSIS:

The purpose of this study was to find out whether pupil involvement was different for high, middle and low achievers; whether pupils generally were more involved in some subjects than in others; and whether certain types of classroom activities were associated with higher or with lower involvement levels.

Students in six 6th grade classrooms from two schools participated. Students in School 1 represented low, middle and high socioeconomic levels; those in School 2 were from working-class or lower-middle class families. Student involvement level (time on task) data were gathered via classroom observations and compared with achievement data. Other factors examined were student sex, whether tasks were selected by the teacher or not, and instructional groupings.

ITEM NUMBER: 145 SHORT TITLE: Good & Beckerman, 1978
Naturalistic Time Study

RESEARCHER'S FINDINGS:

High achievers were found to be more involved (spent more time on task) than low achievers. Boys' and girls' involvement rates were similar; girls' achievement was slightly higher.

Differences in involvement rate for different subjects were small and appeared to result from the response requirements of different subjects (i.e., spelling and math classes require active responses and exhibited more involvement).

Involvement was greater when tasks were assigned than when students chose them. Involvement was greater in small groups or in large groups with a teacher than in whole-class or individual activities.

Teachers whose students were most involved were all from School 1 (large socioeconomic range).

RESEARCHER'S CONCLUSIONS:

None

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 146 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Deady, G. M. The effects of an increased time allotment on student attitudes and achievement in science. Doctoral dissertation, University of California-Berkley, 1969.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Deady, 1969, Science Achievement & Attitudes

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT X

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The duration of the experiment is unknown.

SYNOPSIS:

This study investigated: 1) whether increased time allotment increases student achievement in science; 2) whether the teacher's preference for a particular time allotment for science instruction affects student achievement in science; and 3) whether teacher preference for a particular time allotment for science instruction affects student attitudes toward science.

A total of 324 control and experimental students in grade 4 participated. Data on teacher time allotment preferences were gathered, assignments to time allotment groups were made and students were pre- and post-tested.

ITEM NUMBER: 146 SHORT TITLE: Deady, 1969
Science Achievement & Attitudes

RESEARCHER'S FINDINGS:

No significant differences could be attributed to the treatment variable or the teacher preferences variable when examined across experimental groups, both sexes, IQs or reading groups.

RESEARCHER'S CONCLUSIONS:

None

REVIEWER'S NOTES AND COMMENTS:

The abstract may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 147 LOCATION: Audit & Evaluation Program

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Carnahan, R. S. The effects of teacher planning on classroom processes. Technical Report No. 541, Madison: Wisconsin R & D Center for Individualized Schooling, May 1980.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Carnahan, 1980, Teacher Planning

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Teachers were the unit of analysis for part of this study and there were only nine of them. Moreover, it is likely that the kinds of information presented by the researchers was accessed by non-treatment and partial-treatment teachers via other means. Also, factors such as "teacher planning quality" and "teacher clarity" were defined narrowly and somewhat eccentrically.

SYNOPSIS:

This study had two major purposes: 1) to determine whether providing teachers with information on student aptitude and motivation strategies would affect the quality of teacher-written planning in elementary mathematics classes; and 2) to determine the relationship of written planning quality to the quality of classroom interactive and organizational environments. Nine 5th grade math teachers and their classes were arranged in groups in which the teachers were given aptitude information, aptitude information plus motivation information, or neither. Observers assessed teacher clarity, motivation strategy use and level of student engagement. Student outcomes measured included perceived teacher clarity, attitude toward math, and achievement.

ITEM NUMBER: 147 SHORT TITLE: Carnahan, 1980
Teacher Planning

RESEARCHER'S FINDINGS:

Major findings were that: 1) there was no treatment effect on the quality of written planning done; 2) written planning was not related to motivation strategy or perceived teacher clarity; and 3) student engaged time was not related to motivation strategy, but was related to observed and student-perceived teacher clarity.

Although the engaged time/student achievement relationship was treated as a "secondary question" in this study, it was found that "there was a positive, significant relationship between student engaged time and student achievement."

RESEARCHER'S CONCLUSIONS:

"The data suggest that planning is related to the classroom environment. ...using student background or aptitude information when planning might possibly allow for more effective adaptation of instruction to fit individual or small group needs. ...the results have implications when considered as helping teachers to become aware of how their planning and classroom behavior may effect (sic) the amount of time students actually spend working."

REVIEWER'S NOTES AND COMMENTS:

The technical report may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 148 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Attwell, A. A., Orpet, R. E. & Myers, C. E. Kindergarten behavior ratings as a predictor of academic achievement. Journal of School Psychology, 1967, 6, 43-46.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Attwell, et al., 1967, Kindergarten Behavior & Fifth Grade Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The topic, time factors, was not the major focus of the study even though it turned out to be the best predictor.

SYNOPSIS:

This longitudinal study hypothesized that a positive relationship would be found between the observed behavior of kindergarten children and those children's academic achievement in grade 5, as measured by the California Achievement Test (CAT). While in kindergarten, 100 children in eight kindergarten classes were given a battery of tests which measured amount of motor activity, performance rate, manual dexterity, amount of speech, attention (defined as "the ability of the subject to put forth a mental effort and to concentrate on the task at hand"), anxiety, self-confidence, effort displayed cooperation given to examiner and interest. Five years later, 59 of these children were available to the researchers for follow-up testing and were given the CAT. Seventy correlations between the kindergarten scores and CAT scores were examined.

ITEM NUMBER: 148 SHORT TITLE: Attwell, et al., 1967
Kindergarten Behavior and Fifth Grade Achievement

RESEARCHER'S FINDINGS:

Attention was the only behavior to predict each of the six CAT areas plus total score. Attention was particularly predictive of reading achievement. The next best predictor of overall achievement, and especially reading achievement, was manual dexterity.

RESEARCHER'S CONCLUSIONS:

"The Test Observation Guide [used with the kindergarten children] appears to be useful in predicting some areas of academic achievement, especially reading, at least through the 5th grade. Arithmetic and Mechanics of English are less well predicted."

REVIEWER'S NOTES AND COMMENTS:

Attention, as measured in this study, is roughly equivalent to "engagement rate" measures in other studies.

A copy of the article may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 149 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Fredrick, W. C. The use of classroom time in high schools above or below the median reading score. Urban Education, 1977, 11, 459-464.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Fredrick, 1977, Time Use and Reading

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

A good observational study, but it would be stronger if classes had been observed more than once each.

SYNOPSIS:

This study hypothesized a positive relationship bstween learning time in reading and reading achievement. Observations were made in 184 classrooms in 27 secondary schools in Chicago, 12 of which had reading achievement scores above the median for the area, and 15 of which were below the median. Observers noted: 1) the proportion of students present; 2) the proportion of those present involved in the lesson; 3) the number of students arriving late or leaving early; 4) the number of diverse interruptions to the lesson; 5) the proportion of classes with homework assigned; and 6) the proportion of students doing homework when assigned.

ITEM NUMBER: 149 SHORT TITLE: Fredrick, 1977
Time Use and Reading

RESEARCHER'S FINDINGS:

The high achieving schools had significantly better attendance, a higher level of student involvement, fewer interruptions and more students doing assigned homework than the low achieving schools. High achieving schools also had more homework assigned.

RESEARCHER'S CONCLUSIONS:

"Projected to a total school year, the implications of these differences are astonishing. Therefore, if one wants schools to be accountable, an obvious place to start is to make sure that classroom time is used wisely and well, and that meaningful homework is assigned and checked, and that teachers prepare for class time so that it is not spent with wasteful interruptions and uninvolved students."

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 150 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Arehart, J. E. Student opportunity to learn related to student achievement of objectives in a probability unit. Journal of Educational Research, 1979, 72, 253-258.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Arehart, 1979, Opportunity to Learn

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study examined the relationship between achievement and "opportunity to learn", as measured by counts of teacher statements, teacher-student exchanges, problems attempted per pupil and other factors. While number of problems attempted was positively related to achievement, the study does not directly examine any time-outcome relationships.

ITEM NUMBER: 150 SHORT TITLE: Arehart, 1979
Opportunity to Learn

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 151 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Slavin, R. E. Student teams and comparison among equals: Effects on academic performance and student attitudes. Journal of Educational Psychology, 1978, 70, 532-538.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Slavin, 1978, Teams & Equals

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The study is not directly focused on time factors.

SYNOPSIS:

This study investigated the effects on achievement and attitude of: 1) kinds of reward (recognition based on team vs. individual performance) and 2) kinds of comparison (with students of like ability vs. with the entire class). Participants were 205 seventh graders studying grammar and punctuation over ten weeks. Achievement tests, sociometric instruments and attitude questionnaires were administered, and observers recorded individual and team task behaviors.

ITEM NUMBER: 151 SHORT TITLE: Slavin, 1978
Teams & Equals

RESEARCHER'S FINDINGS:

Team reward and comparison with students of like ability enhanced time on task, interpersonal perceptions and student attitudes. There were no academic achievement effects noted for either factor.

RESEARCHER'S CONCLUSIONS:

Team interventions have a positive effect on non-achievement outcomes--attitudes, working cooperatively, etc.

REVIEWER'S NOTES AND COMMENTS:

Though the study was not designed to determine whether increases in time-on-task would lead to increases in achievement, it did find that certain structures produced time-on-task increases with no achievement increases.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 152 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Sjogren, D. D. Achievement as a function of study time. American Educational Research Journal, 1967, 4, 337-343.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Sjogren, 1967, Achievement and Study Time

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study found that Carroll's (1963) model, in which the ratio between time spent learning and time needed to learn is considered an accurate predictor of achievement, did not apply to the subjects studied. This suggests that the time-achievement relationship, if any, is different than Carroll proposed, although what the real relationship might be is not explored.

ITEM NUMBER: 152 SHORT TITLE: Sjogren, 1967
Achievement and Study Time

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 153 LOCATION: NWREL Dissemination Program

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Rosenshine, B. V. Academic engaged time, content covered, and direct instruction. University of Illinois, n.d.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Rosenshine, n.d., Academic Engaged Time

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE X DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a very good review which clearly restates the important findings and conclusions emerging from the research.

SYNOPSIS:

This is a review/analysis of research on the effects of instructional time and teaching methods on the reading and mathematics achievement of students in grades 1-5 in the U.S. It is "both a summary and expansion of three previous papers: Rosenshine (1976), Berliner and Rosenshine (1977) and Rosenshine and Berliner (1977)."

ITEM NUMBER: 153 SHORT TITLE: Rosenshine, n.d.
Academic Engaged Time

RESEARCHER'S FINDINGS:

Of 15 studies of "content covered or opportunity to learn", all but one found significant relationships between content covered and student achievement gain.

Student attention or engagement was also strongly related to achievement.

"In studies which consider only allocated time, most of the results tend to be non-significant."

"Teachers who most successfully promoted achievement gain...approached the subject matter in a direct, businesslike way, organized learning around questions they posed, and occupied the center of attention." Student choice of activities yielded negative results.

Teachers working with small groups (3-7 students) or large groups was positively related to achievement; teachers working with three students or less was negatively related to class achievement gain.

RESEARCHER'S CONCLUSIONS:

The author cautions that the studies reviewed are of varying qualities. He also emphasizes "the need to proceed with caution in implementing [the findings emerging from the studies] into teacher training programs or into evaluative checklists for teachers."

Content covered and student engaged time are the most consistently reliable predictors of achievment.

"There are no lists of essential teacher behaviors, nor is it claimed that any one type of teaching method or style is inherently superior.... The primary goal of the teacher is obtaining 'sufficient' student content covered and academically engaged minutes."

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 154 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: McKinney, J. D., Mason, J., Perkerson, K., and Clifford, M. Relationship between classroom behavior and academic achievement. Journal of Educational Psychology, 1975, 67, 1980-203.

DESCRIPTORS: Time Factors (Learning), Student Characteristics

SHORT TITLE: McKinney, et al., 1975, Behavior & Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The sample is relatively small and the observation periods relatively short. The study is nevertheless a valid one and convincingly demonstrates the behavior/achievement relationship.

SYNOPSIS:

This study examined the relationship between classroom behavior and achievement. Ninety 2nd graders in five classes were observed for 5 minutes per day for 4 days in the fall and again in the spring. Observations took place during language arts instruction. A classification system was used in which all observed behaviors were recorded under one of 12 categories.* Language arts achievement tests were administered to the children in the fall and spring.

*Constructive, self-directed activity; attending; constructive play; task-oriented interaction; nonconstructive activity; distractibility; passive responding; gross motor activity; social interaction; dependency; aggression; teacher interaction.

ITEM NUMBER: 154 SHORT TITLE: McKinney, et al., 1975
Behavior & Achievement

RESEARCHER'S FINDINGS:

The behavior of boys and girls did not differ significantly. The behavior of the individual children, and therefore of the class, did not change significantly between the fall and spring observations.

Although the degree of significance differed between spring and fall behavior/achievement correlations, all behaviors were significantly related to achievement. In general, the higher achieving children exhibited behaviors describable as constructive, active, attentive, task-oriented and independent. Lower achieving children were generally described as being less engaged, due to behaviors that were nonconstructive, passive, distractable, social (as opposed to task-oriented), dependent and/or aggressive.

RESEARCHER'S CONCLUSIONS:

"Overt classroom behavior is an important determinent of academic progress."

The combination of behavioral information and ability test data is a more reliable predictor of achievement than either kind of information by itself.

The point in the school year when behavioral observations are made appears to affect results and should be considered a variable.

Interventions to modify behavior may have a positive effect on academic progress.

REVIEWER'S NOTES AND COMMENTS:

The authors state one curious conclusion--that if behavior modification interventions are to be used, they should be aimed at altering behavior patterns that impair a child's learning, rather than being aimed at discrete behaviors for no better reason than because those behaviors are "bothersome to the teacher." It seems that if a behavior is bothersome because it interferes with the learning of other children or with the teacher's teaching, then it is important to address it whether or not it impairs the learning of the child in question.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 155 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Anderson, L. W. & Scott, C. C. The relationship among teaching method, student characteristics, and student involvement in learning. Journal of Teacher Education, 1978, 29(3), 52-57.

DESCRIPTORS: Time Factors (Learning), Student Characteristics,

SHORT TITLE: Anderson & Scott, 1978, Method and Student Involvement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This study found that different "student types" exhibit different amounts of time-on-task in response to different teaching methods. While the researchers clearly believe that engaged time is related to achievement, their study was not designed to explore this relationship.

ITEM NUMBER: 155 SHORT TITLE: Anderson & Scott, 1978
Method and Student Involvement

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 156 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: O'Connor, P. D., Stuck, G. B. & Wyne, M. D. Effects of a short-term intervention resource-room prpgram on task orientation and achievement. The Jounal of Special Education, 979, 13, 375-385.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: O'Connor, et al., 1979, Resource Room Effects

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a carefully designed and executed study. Its relationship to other time factors literature is also well-explicated.

SYNOPSIS:

The study had two purposes: 1) to adapt the Walker enginered intervention program as a short-term resource model to function as an integral part of a regular school, and 2) to establish comparison groups in order to evaluate the immediate and long-term effects of such a program on reading and math achievement and on-task behavior.

Second, third and sixth graders with IQs above 89 who were one or more years below grade level in reading and/or math and who spent low percentages of time on task were selected for the study. Groups of approximately 10 children participated in each of three 8-week intervention phases. For each phase, a comparison group of approximately 10 children remained in the regular

Continued

classroom.* Observers recorded student behavior and achievement tests were administered.

RESEARCHER'S FINDINGS:

Resource room students spent significantly more time on-task and achieved at a significantly higher level in reading and math than did their comparison group counterparts. These advantages were maintained over a period of four months after their return to regular classrooms on a full-time basis.

Comparison group students also evidenced increases in on-task behavior after treatment students returned to join them in the regular classroom, although these increases were far less dramatic than the 200% increase on the part of the treatment students. The comparison group's achievement gains were about one-half those of the treatment group.

RESEARCHER'S CONCLUSIONS:

"The findings of this study strongly support earlier research showing the critical relationship between task attentiveness and school achievement."

REVIEWER'S NOTES AND COMMENTS:

*It was agreed that children assigned to the comparison group would become eligible for participation in the resource room program after having served the comparison function for six months.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 157 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Wyne, M. D. & Stuck, G. B. Time-on-task and reading performance in underachieving children. Journal of Reading Behavior, 1979, 11, 119-128.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Wyne & Stuck, 1979, Time-on-Task/Reading

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This is virtually the same article as that reported in Item No. 156, except that it reveals the findings only of the reading (not the math) part of the study.

ITEM NUMBER: 157 SHORT TITLE: Wyne & Stuck, 1979
Time on Task/Reading

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 158 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: Janury 1981

CITATION: Hanson, R. A. & Ross, S. M. The adequacy of instructional time allocation. Studies in Educational Evaluation, 1975, 1, 23-29.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Hanson & Ross, 1975, Instructional Time Adequacy

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

The stuay clearly shows necessity to provide adequate time allocations.

SYNOPSIS:

This study demonstrated that both completion of program activities and achievement are dependent on adequate amounts of allocated time for instruction and learning to take place. Noting that some users of the developmental First Year Communication Skills Program (FYCSP) had failed to complete the program in the allotted 35 weeks, researchers worked with program users to determine the adequacy of instructional time allocations suggested by program developers. Sixty-six kindergarten classes comprised the sample. Teachers kept a weekly log of time so that researchers could learn the overall time spent on each unit, the average daily instructional time, and the amount of instructional time per outcome area.

ITEM NUMBER: 158 SHORT TITLE: Hanson & Ross, 1975
Instructional Time Adequacy

RESEARCHER'S FINDINGS:

It was found that those classes which had failed to complete the program had devoted to its teaching less time than those who did complete it and less time than had been recommended by the developers.

Achievement test results indicated that recommended instructional time for two of the units was inadequate.

RESEARCHER'S CONCLUSIONS:

Researchers concluded that the recommended instructional time was adequate for most program units, and that it was failure to follow recommendations that caused some classes to complete only part of the program.

As the allocated instructional time recommended for two of the units appeared to have a negative affect on achievement, researchers also recommended that these suggested time periods be lengthened.

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 159 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Barley, S. D. Time: In school, and learning. Ed.D. Dissertation, University of Rochester, 1975. (DA 2583-A)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Barley, 1975, Time Dissertation

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT X

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

Although the abstract of this dissertation indicates that one of the purposes of the study was to review the literature on instructional time, none of the findings on the effects of instructional time are presented in the abstract.

ITEM NUMBER: 159 SHORT TITLE: Barley, 1975
Time Dissertation

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 160 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Fredrick, W. C., Walberg, H. J. & Rasher, S. P. Time, teacher comments, and achievement in urban high schools. Journal of Educational Research, 179, 73, 63-65.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Fredrick, et al., 1979, High School Time Use

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

The study clearly focuses on the effects of time lost by absences and classroom interruptions.

SYNOPSIS:

This study sought to determine the effects on achievement of in-class learning time and of positive and negative teacher comments. Each of 175 high school classrooms in Chicago was observed for two periods in February 1976. Observers noted the number of students present in the class, whether these students appeared engaged in the lesson and their entrances and exits from the classroom. Interruptions of the lesson were logged. These four variables were used to derive a measure called Actual Student Time. Teachers' evaluative comments about student performance were classified as positive or negative and recorded. These behaviorial data were compared with student achievement records in reading.

ITEM NUMBER: 160 SHORT TITLE: Fredrick et al., 1975
High School Time Use

RESEARCHER'S FINDINGS:

A positive relationship was found between AST and achievement (.54) and between positive comments and achievement (.22). A negative relationship was found between negative comments and achievement (-.08), using 1975 achievent data.

The number of evaluative statements of any kind was surprisingly low; the researchers felt observers may have missed subtle evaluative statements.

The incidence of various interferences with student learning time was quite high.

RESEARCHER'S CONCLUSIONS:

"Observers can detect events that are associated with advances in achievement.... It is apparent that major time for learning was lost in these schools.... Establishment of policies for bringing in absent students and for increasing the quality of classroom interaction are two visible areas with room for improvement."

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 161 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Smith, N. M. Allocation of time and achievement in elementary social studies. Journal of Educational Research, 1979, 72, 231-236.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Smith, 1979, Allocated Time/Social Studies

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

"The findings of this research are clouded by methodological problems."--true.

SYNOPSIS:

This study asked: Does time allocated for social studies instruction account for variance in student achievement? Sixty-eight fifth grade teachers in Maryland kept logs of the time they allotted to social studies instruction for a period of 101 days. Attendance records and records of the level of student involvement were kept over this same period of time. Students were then given the STEP Achievement Test (Social Studies).

ITEM NUMBER: 161 SHORT TITLE: Smith, 1979, Allocated Time/Social Studies

RESEARCHER'S FINDINGS:

The contribution of allocated time to achievement was nonsignificant.

The study also revealed that there was considerable variation in the amount of time the 68 teachers allocated to social studies instruction and that teachers generally spent less time on such instruction than was called for by district policies.

Of the other variables examined in relation to achievement, only class intelligence was significantly (and positively) related. Class involvement and attendance were related, but not significantly.

RESEARCHER'S CONCLUSIONS:

Conclusions are in the form of recommendations: 1) findings do not warrant taking steps to increase the amount of time spent on social studies instruction; 2) further study should take place regarding the huge variance in time spent teaching social studies; 3) discrepancies between these findings and those of previous research may be the result of definitional differences.

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 162 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Karweit, N. Quantity of schooling: A major educational factor? Educational Researcher, 1976, 5(2), 15-17.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Karweit, 1976, Quantity a Major Factor

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The basic idea of reanalyzing Wiley and Harnischfeger's study was good--suggests complexity of other factors interacting with time.

SYNOPSIS:

This study was conducted to determine whether the results of Wiley and Harnischfeger's 1974 study would hold true with other and larger populations. The W & H study had used data on 6th graders in Detroit which had been published in the 1966 Coleman Report, and a very strong positive relationship was found between quantity of schooling and achievement. (See Item No. 167.)

The present study examined the quantity of schooling/achievement relationship using the W & H data plus 1) additional Coleman report data, 2) data collected by McDill & Rigsby in 1973, and 3) 1974 data from the State of Maryland.

ITEM NUMBER: 162 SHORT TITLE: Karweit, 1976
Quantity a Major Factor

RESEARCHER'S FINDINGS:

Reanalysis of the W & H data found results similar to those W & H originally reported. However, analysis of data on the non-central city schools in the Detroit area revealed the effect of the quantity of schooling on achievement to be inconsequential. Study of central city/non-central combinations in other large cities also failed to find the large positive effects reported by W & H. Analysis of the Maryland data on 3rd, 5th, 7th and 9th graders and of the McDill & Rigsby data on 20 high schools revealed a very modest attendance/achievement relationship for some achievement outcomes areas and none for others. A final analysis with the 12th grade Coleman data revealed relationships between quantity of schooling and achievement in only a few areas and these were not significant.

RESEARCHER'S CONCLUSIONS:

The Wiley and Harnischfeger findings, while valid for the population studied by them, are not generalizable.

This does not mean that quantity of schooling is not important. "However, before making claims for its large impact--claims which are aimed at influencing policy decisions--its effects should be examined in a wide variety of school settings, with attention to individual student differences and to the possible importance of cumulative effects."

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the backup file on Time Factors (Learning). See also Item Report No. 167.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 163 LOCATION: PSU Library

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Husen, T. (Ed.) School decisions relative to curriculum--Problems related to the curriculum and instructional methods. Chapter 4 of International study of achievement in mathematics. (Vol. 2), New York: John Wiley & Sons, 1967, 143-198.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Husen, 1967, International Math Study

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Controls for such confounding factors such as cultural expectations do not appear to have been adequately established.

SYNOPSIS:

The examination of time factors in relation to mathematics achievement is one small part of an international study in which mathematics instruction and achievement in 12* countries were investigated and compared.

In the part of the study dealing with time factors, researchers examined data gathered from the 12 countries to determine what relationship, if any, existed between mathematics achievement and: 1) amount of overall schooling; 2) amount of mathematics instruction; and 3) amount of mathematics homework. It was also hypothesized that the amount of time devoted to all school homework would be more closely related to lower mental process scores than to higher mental process scores.

*Austrialia, Belgium, England, Finland, France, Germany, Israel, Japan, Netherlands, Scotland, Sweden, United States.

ITEM NUMBER: 163 SHORT TITLE: Husen, 1967
International Math Study

RESEARCHER'S FINDINGS:

The most significant finding was that greater amounts of mathematics homework was strongly positively related to the math achievement of children in the lower elementary grades and of students whose math coursework is a major part of their career preparation.

When all countries were considered, achievement in mathematics had little relationship to the number of hours per week of schooling. In fact, the relationship, such as it was, was slightly negative.

Mathematics achievement has a slight positive relationship to the number of hours per week allocated for math instruction.

For populations other than young elementary students and students preparing for careers involving mathematics, the number of hours per week spent on mathematics homework makes no appreciable difference in achievement.

The relationship between the amount of homework time expended was more closely related to lower mental process scores than to higher ones.

RESEARCHER'S CONCLUSIONS:

None drawn.

REVIEWER'S NOTES AND COMMENTS:

A copy of the findings may be found in the Time Factors (Learning) backup file.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 164 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Nieman, R. H. & Gastright, J. F. Preschool plus all-day kindergarten: The cummulative effects of early child programs on the cognitive growth of four and five year old children. Paper presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., March-April 1975. (ERIC/EDRS No. ED 105 998)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Nieman & Gastright, 1975, Preschool Programs

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

The quality of the study is limited as subjects were not randomly assigned, initial status data were not collected for all students, and populations were subject to uncontrolled mortality.

SYNOPSIS:

This study investigated the relationship between the amount of time students participate in preschool/kindergarten classes and later school achievement. Approximately 1,500 children who had participated in Title I 1) preschool; 2) half-day kindergarten; 3) all-day kindergarten; and 4) all-day kindergarten plus preschool were subsequently tested at intervals, up through the end of second grade. Both intelligence tests and reading tests were administered to them and to primary classmates who had not had preschool or kindergarten experiences.

ITEM NUMBER: 164 SHORT TITLE: Nieman & Gastright, 1975
Preschool Programs

RESEARCHER'S FINDINGS:

"...the children who attend preschool score significantly higher on the Boehm Test of Basic Concepts than those who do not attend. These differences are even greater at the end of kindergarten.... Follow-up studies on samples of children form each group show that these differences are maintained at the end of both the first and second grade."

This positive relationship exists independent of a wide range of teaching styles, materials and methodologies.

These findings are consistent with those of other studies on the effects of preschool and kindergarten experience.

RESEARCHER'S CONCLUSIONS:

...Results suggest that preschool and kindergarten have a significantly positive effect on both intelligence and reading test scores.... Further, the evidence suggests that these gains are maintained until the end of the second grade. Results for populations with varying amounts of pre-first grade schooling suggest that there is a positive and lasting relationship between the amount of time students participate in preschool and kindergarten, and their performance on tests.

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 165 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Welch, W. W. & Bridgham, R. G. Physics achievement gains as a function of teaching duration, School Science and Mathematics, 1968, 68, 449-455.

DESCRIPTORS: Time Factors (Learning), Student Ability

SHORT TITLE: Welch & Bridgham, 1968, Physics Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

This is a good study with only minor design problems, e.g., reliability of measures is good but not perfect, etc.

SYNOPSIS:

This study was designed to determine what relationship, if any, exists between 1) instructional time and achievment in physics, and 2) instructional time and the mean mental ability of students. Forty-one high school physics teachers and approximately 2,000 students from 20 states were studied during a trial test of materials from a developmental project, Project Physics. Teachers logged the total number of days during which physics was taught in each of the project's six units. Students were pre- and post-tested, and data were adjusted to account for initial differences in physics knowledge. Mental ability tests were administered to the students.

ITEM NUMBER: 165 SHORT TITLE: Welch & Bridgham, 1968
Physics Achievement

RESEARCHER'S FINDINGS:

No relationship was found between allocated time for physics instruction and physics achievement.

No relationship was found between allocated time for physics instruction and the average student ability level of a class.

RESEARCHER'S CONCLUSIONS:

Since extra time spent on a unit appears not to affect achievement, the researchers recommend giving each unit its recommended 30 days so that later units will not be slighted or omitted.

Researchers were surprised that no relationship was found between instructional time and student ability. They conclude that those teachers who expended more than 30 days on any of the project's units, they did so for reasons other than low student ability levels.

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the backup file on Time Factors (Learning).

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 166 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Lorentz, J. L. & Coker, H. Empirically derived dimensions of classroom behavior as predictors of student achievement. Paper presented at the Annual Meeting of the American Educational Research Association, Boston, MA, April 1980.

DESCRIPTORS: Teaching Methods, Time Factors (Learning), Grouping (Instructional Purposes)

SHORT TITLE: Lorentz & Coker, 1980, Classroom Behavior & Achievement

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE ___ SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

The major focus is not on time factors per se, but rather on techniques for generating variables to be studied.

ITEM NUMBER: 166 SHORT TITLE: Lorentz & Coker, 1980
Classroom Behavior & Achievement

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 167 LOCATION: NWREL Info. Cntr./Periodicals

REVIEWER: K. Cotton DATE REVIEWED: January 1981

CITATION: Wiley, D. & Harnischfeger, A. Explosion of a myth: Quantity of schooling and exposure to instruction, major educational vehicles. Educational Researcher, 1974, 3(4), 7-12.

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Wiley & Harnischfeger, 1974, Quantity of Schooling

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

The study focuses directly on time factors.

SYNOPSIS:

The authors of this paper, utilizing a model describing the relationship between schooling exposure time and achievement, examined data which had been utilized for other studies or were availabile from other sources. The motivation for this undertaking was their observation that many previous studies had, for a variety of reasons, produced inaccurate findings and conclusions. Reasons included failure to differentiate between quantitative and qualitative factors, wrongly categorizing data on the amount of time for exposure to instruction, etc.

The model includes four time factors which bear on achievement: total allocated exposure time, percent usable exposure time, percent active learning time, and total needed learning time.

ITEM NUMBER: 167 SHORT TITLE: Wiley & Harnischfeger, 1974
Quantity of Schooling

RESEARCHER'S FINDINGS:

Examination of data on time factors and application of the model to these data revealed findings which were very different from the findings of some other researchers. Overall, Wiley and Harneschfeger found that quantity of schooling as defined by the model has an enormous impact on achievement. In one part of their analysis, for example, these researchers found that a 24 percent increase in the amount of schooling in the intermediate grades resulted in an increase in reading achievement gains of two-thirds and, in math and verbal skills, one-third.

The authors also noted that, from state to state, there are enormous differences in the amounts of education offered.

RESEARCHER'S CONCLUSIONS:

"...schooling has large, important effects if we ask adequate questions such as: What is the effect of a particular amount of schooling?"

"Cutbacks in the lengths of the school year and school day will result in significant drops in school achievement."

"...our findings of important consequences of the quantity of schooling lead us to advocate more time for those who need it, so that more equal individual benefits of schooling will be obtained."

REVIEWER'S NOTES AND COMMENTS:

A copy of the article may be found in the Time Factors (Learning) backup file. See also Item Report No. 162.

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 168 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Fox, R., et al. Tracing teacher effects through student behavior to learning outcomes. Washington, D.C.: NIE, August 1978. (ERIC/EDRS No. ED 169 039)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Fox, 1978, Tracing Teacher Effects

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 [3] 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Observation time was limited, but this is nevertheless a good study.

SYNOPSIS:

After providing a brief summary of research demonstrating that time-on-task is a more reliable predictor of achievement than allocated instructional time, the researchers describe the methods and outcomes of their own time study. The study was designed to determine: 1) the effect of teacher characteristics and teacher classroom behaviors on student time-on-task, and 2) the effect of student time-on-task on four kinds of student outcomes--achievement, self-esteem, general attitudes and coping skills.

The sample consisted of 53 sixth grade teachers and a subsample of 408 of their students in Austin, Texas. Teacher personal characteristics were profiled, and observers visited classrooms to record teacher classroom behaviors and student time-on-task (for 78 students). Achievement, attitude and affective data were gathered through tests and questionnaires.

ITEM NUMBER: 168 SHORT TITLE: Fox, 1978
Tracing Teacher Effects

RESEARCHER'S FINDINGS:

Teacher attributes which were significantly and positively related to time-on-task included efficiency; a moderate (rather than extreme) score on procedure, responsibility and courtesy; and systematic, organized classroom behavior.

Time-on-task was positively and significantly related to attitude improvement, coping skill gains, self-esteem and standardized achievement. An average amount of time-on-task was better than a low amount, but the largest and most positive effects were associated with consistently high time-on-task.

RESEARCHER'S CONCLUSIONS:

"the overall conclusion is that teacher characteristics do affect children's work habits, in expectable ways, and children's work habits, in turn, affect their learning, their self-esteem, and their broad coping skills.

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 160 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Easton, J. Q., Muirhead, R. S., Fredrick, W. C. & Vanderwicken, S. Relationship among student time on task, orientation of teachers, and instructional grouping in elementary reading classes. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 1979. (ERIC/EDRS No. ED 169 503)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Easton, et al., 1979, Time and Elementary Reading

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 [4] 5 (Strong)

BRIEF DISCUSSION OF RATING:

Observation time was short, but this is otherwise a well-designed and conducted study.

SYNOPSIS:

This study was designed to determine the effect of various factors on time-on-task and the effect of time-on-task on student achievement. Teachers and students in 74 primary and intermediate classrooms were observed while reading instruction was in progress. Reading achievement scores were examined.

ITEM NUMBER: 169 SHORT TITLE: Easton, et al., 1979
Time and Elementary Reading

RESEARCHER'S FINDINGS:

Instruction directed to the entire class (as opposed to instruction of a group within the class) was positively related to student involvement. Student involvement was higher when there was one instructional group and activity than when there were two or more groups or activities. These relationships were noted both within and between classes.

Poverty was negatively related to both involvement and achievement. Involvement was positively related to achievement.

RESEARCHER'S CONCLUSIONS:

"The implications are not that teachers should always be oriented to the entire class or should have only one instructional activity at a time, but that teachers should be more aware of all students and not regard any activity as having secondary importance."

REVIEWER'S NOTES AND COMMENTS:

None

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 170 LOCATION: Audit and Evaluation Program

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Stallings, J. A. Instructional processes that work in remedial reading classes. Paper presented at "R & D Speaks: Classroom Management" Conference, Dallas, Texas, May 1979.

DESCRIPTORS: Class Organization, Time Factors (Learning)

SHORT TITLE: Stallings, 1979, Secondary Remedial Reading

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS X

RELEVANT ___ IRRELEVANT ✓ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 2 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

SYNOPSIS:

This paper describes the same study as is reported in Item No. 135.

ITEM NUMBER: 170 SHORT TITLE: Stallings, 1979
Secondary Remedial Reading

RESEARCHER'S FINDINGS:

RESEARCHER'S CONCLUSIONS:

REVIEWER'S NOTES AND COMMENTS:

111

SCHOOL EFFECTIVENESS PROJECT, ITEM REPORT

ITEM NUMBER: 171 LOCATION: NWREL Info. Cntr./Microfiche

REVIEWER: K. Cotton DATE REVIEWED: February 1981

CITATION: Isaacs, L. M. & Stennett, R. G. Increasing "time on task" through a multi-method approach to reading instruction. Research Report. London Board of Education (Ontario), 1979. (ERIC/EDRS No. ED 181 404)

DESCRIPTORS: Time Factors (Learning)

SHORT TITLE: Isaacs & Stennett, Increasing Time on Task

SKIMMED, REJECTED FOR PROJECT PURPOSES, NO ANALYSIS ___

RELEVANT ✓ IRRELEVANT ___ FOR PRESENT PURPOSES

PRIMARY SOURCE X SECONDARY SOURCE ___ DISSERTATION ABSTRACT ___

RATING OF QUALITY OF STUDY (for project purposes):

(Weak) 1 [2] 3 4 5 (Strong)

BRIEF DISCUSSION OF RATING:

Some methodological problems were noted (See "Findings" section). It is not specified how many students participated or their age/grade level(s).

SYNOPSIS:

This study involved increasing the time on task of elementary students who were below grade level in reading in order to raise their reading achievement. Over a six-month period, subject students received additional reading instruction and practice in one of three ways: 1) In Condition 1, the children received tutoring plus home-based reinforcement; 2) in Condition 2, they received tutoring with home-based reinforcement plus instruction by the Learning Resource Teacher in a small group withdrawl program; 3) in Condition 3, they received tutoring with home-based reinforcement plus small-group withdrawl instruction and daily rehearsal of reading skills with their classroom teacher. Reading post-tests were administered.

ITEM NUMBER: 171 SHORT TITLE: Isaacs & Stennett, 1979
Increasing Time on Task

RESEARCHER'S FINDINGS:

Students in all three treatment conditions showed significant improvement in reading skills. However, students in Conditions 2 and 3 did not make greater gains than those in Condition 1.

Researchers noted that the expected amounts of extra instructional time the children would receive were greater than the actual amounts: 20-, 40- and 50-minute increases were expected for Conditions 1, 2 and 3 respectively; 15-, 30- and 45-minute increases actually occurred.

Several methodological problems were noted. Students did not always receive all of the extra instruction for their assigned condition; and students in Conditions 2 and 3 were collapsed (or, rather, their data were collapsed) for analysis.

RESEARCHER'S CONCLUSIONS:

Implementation of programs aimed at providing extra time on task is difficult without additional staff. It is also difficult to find an acceptable method of providing additional time on task within normal instructional hours.

Planning and discussion is necessary in order to solve these problems.

REVIEWER'S NOTES AND COMMENTS:

None